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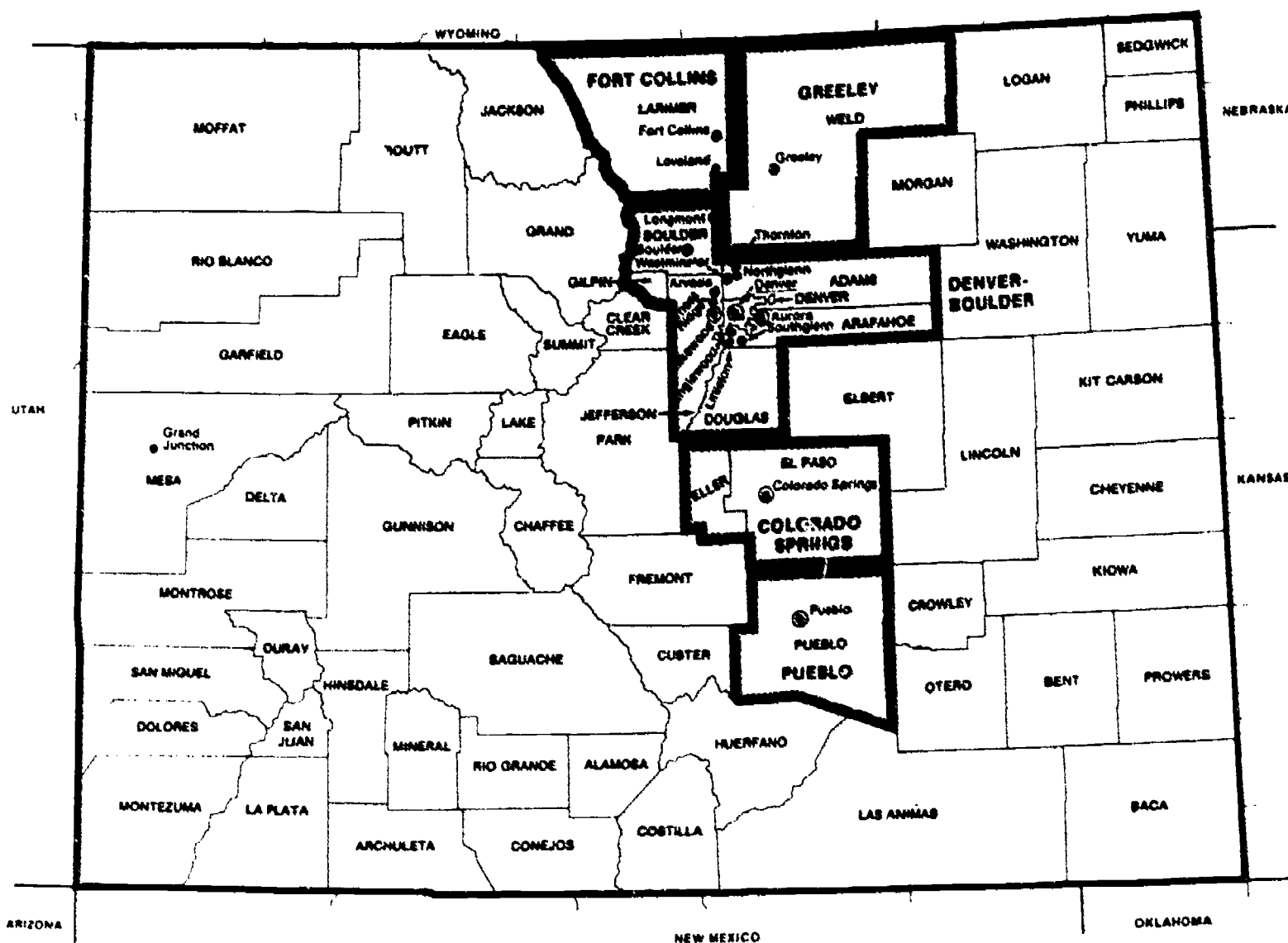
## ABSTRACT

A profile of Colorado is provided, which examines trends in the state's economy, environment, population, crime, and education. The state is characterized by a lack of economic diversity, ecological vulnerability, and concentrated population. Although the work force is generally well educated, Hispanic Americans tend to be less successful in business and education than Whites. Economic recovery is predicted as business and technological services increase; however, the state continues to depend heavily on agriculture, minerals, and energy extraction. Recommendations are made to establish programs for Hispanic educational success; implement "pay-as-you-go" educational financing; encourage small minority-owned businesses; provide economic equity for all regions; and develop local educational initiatives. Six tables and three figures are included. (9 references) (LMI)

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# COLORADO:



## THE STATE AND ITS EDUCATIONAL SYSTEM

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Over the years, the author has learned much about Colorado from Cal Frazier, former Superintendent of Public Instruction, Dick Jonson, new President of the Western Interstate Commission for Higher Education, Frank Newman and Aimes McGuinness of the Education Commission of the States. Susan Zimmerman's coalition-building efforts in Denver were very helpful, and Martha Romero, currently on the Commissioner's staff but soon to move to Pike's Peak Community College, has provided many insights about Colorado Hispanic populations and the state in general.

However, errors of fact or interpretation remain the responsibility of the author.

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### Cover Note:

The cover map makes clear the population distribution within the "wedge" which is the Front Range, giving Colorado areas of very high and very low population density. Very few major markets lie within 200 miles of the wedge, making it hard for Denver to become a major distribution center. It also indicates the difficulty of providing water and energy resources to so many people in such a small area, which also explains the potential for pollution of many kinds—it's hard to "flush anything away" in Colorado! Population "maps" can be very useful for people who are looking for the human equivalents to rivers and mountains, including planners, marketers and even educators.

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**COLORADO:  
THE STATE AND  
ITS EDUCATIONAL SYSTEM**

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# COLORADO—THE STATE AND ITS EDUCATIONAL SYSTEM

The images of Colorado that float into people's heads are probably very similar—mountains, skiing, Denver and the "Front Range," Coors, energy extraction, Stapleton Airport and the Air Force Academy. This all comes from the major expansion of the Colorado economy during the seventies. Probably no state has benefitted as much from its scenery, in that some of the best educated people in America found Colorado to be a most appealing place to live. (By 1980, Colorado had the highest percentage of people with a college degree of any state, but HALF of them earned their degree in another state, meaning that the good taxpayers of Michigan, Massachusetts, Indiana and Ohio paid for that education, after which the recipient took it to Colorado.)

Today, although the scenery is still gorgeous and the ski runs are packed, there is a sense in which the bloom is off the rose. The 1982 recession skidded the Colorado economy down as fast as a ski run at Vail, even though the effects were not clear until 1984. Although oil prices probably led the way, the speculative and overbuilt real estate markets were right behind, especially in the Denver metropolitan area where vacancy rates reached almost 40 percent. Although Denver is touted as the high tech center of the Rockies along with financial and business services, the primary markets are very heavily agriculture, energy and mineral production. These three seem to continue to be the most volatile sectors of the nation's economy, making Denver, as well as the rest of the state, very vulnerable to economic cycles. Even Colorado's profitable manufacturing sector is linked to energy and minerals.

In fact, the Rocky Mountain states have done so badly compared to the rest of the nation that, for the first time, they now rank below the southeast in terms of 1988 per capita income. In addition, the gap between the top and bottom region is wider than at any time since 1969 (see Table 1).

**Table 1**  
**Regions Ranked by**  
**Per Capita Income, 1988**

<u>Region</u>	<u>Rank</u>
New England	1
Mid-Atlantic	2
Plains	3
Southwest	4
Southeast	5
Rockies	6

Source: U.S. Department of Commerce, April 1989.

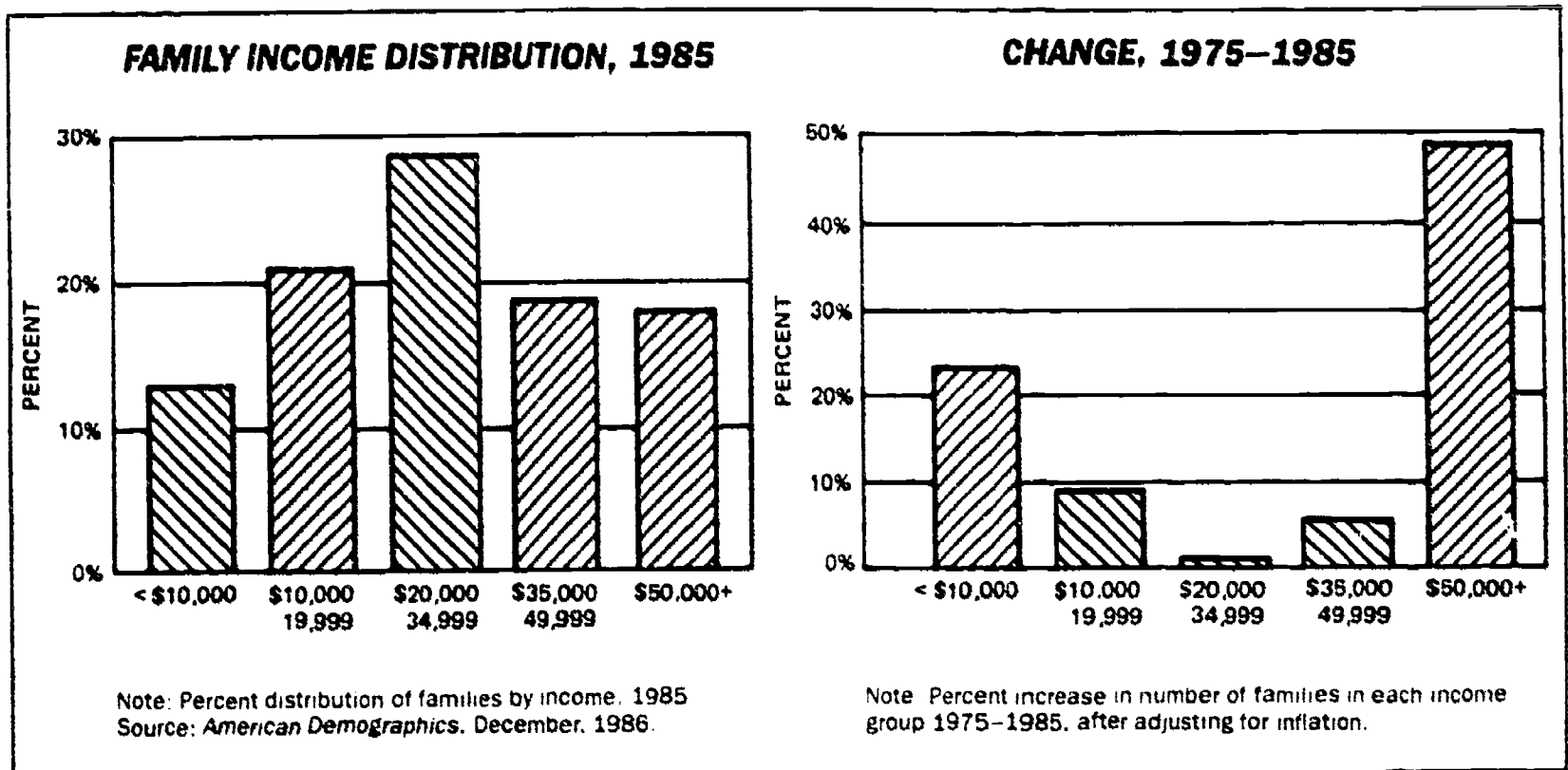
If there is a moral to this story, it is that in the 1990s, regions, states and individual families will be increasingly richer or poorer, with fewer in the middle income range. For families, the income data look like that shown in Figure 1 (Page 2).

If one questions how the Rocky Mountain states arrived at the bottom on per capita income, several answers would include business failures per million population as well as housing foreclosures (see Figures 2 and 3).

A final indicator of trouble in the mountains is to look at the U.S. cities with the worst air pollution, according to the 1988 Environmental Protection Agency's (EPA) report on carbon monoxide violation days (see Table 2). The cities with the BEST air quality in the EPA report are shown in Table 3.

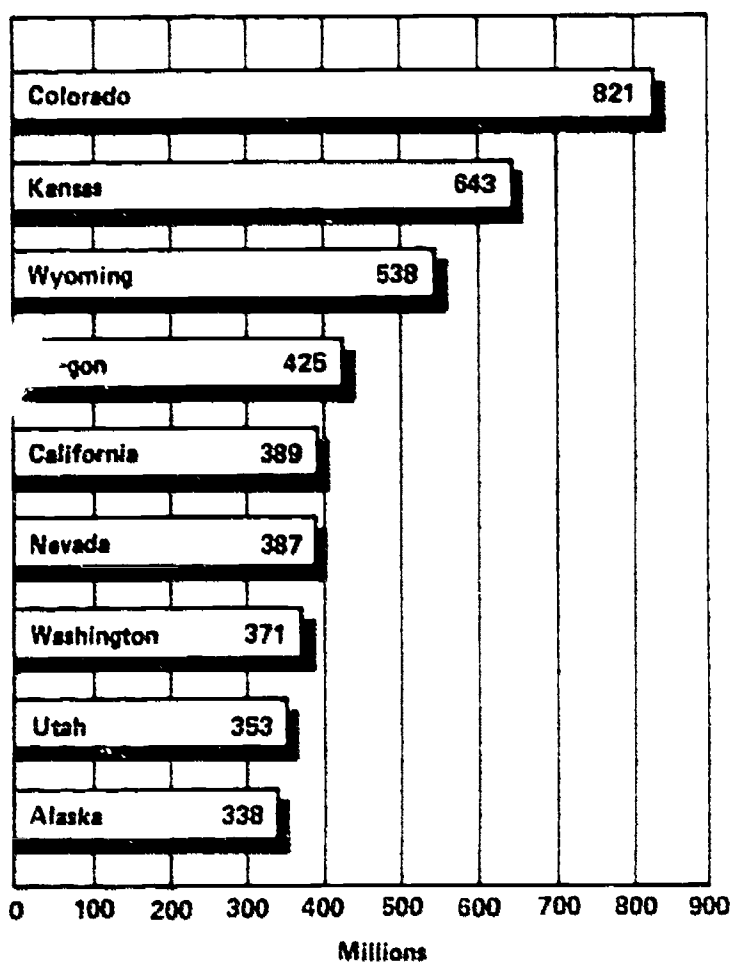
While the EPA appears to be measuring air pollution levels, they are also measuring industrial conversion levels as well. It is clear that most of the "Rust Bowl" states, written off by many futurists as over the hill, have turned their economies around, and are building diversified eco-

**Figure 1**



**Figure 2**

**Business Failures for Selected States 1988**



(Business failures per million residents.)  
Source: The Chronicle, using data from Dun & Bradstreet, 1988.

**Table 2**

**Cities With Worst Air Pollution, 1988**

	Number of Violation Days
1. New York	86
2. Spokane, Washington	66
3. Los Angeles	40
4. Steubenville, Ohio	24
5. Denver	24
6. Las Vegas	20
7. Provo, Utah	20
8. Fairbanks, Alaska	15
9. Albuquerque	14

Source: Environmental Protection Agency, 1988

**Table 3**

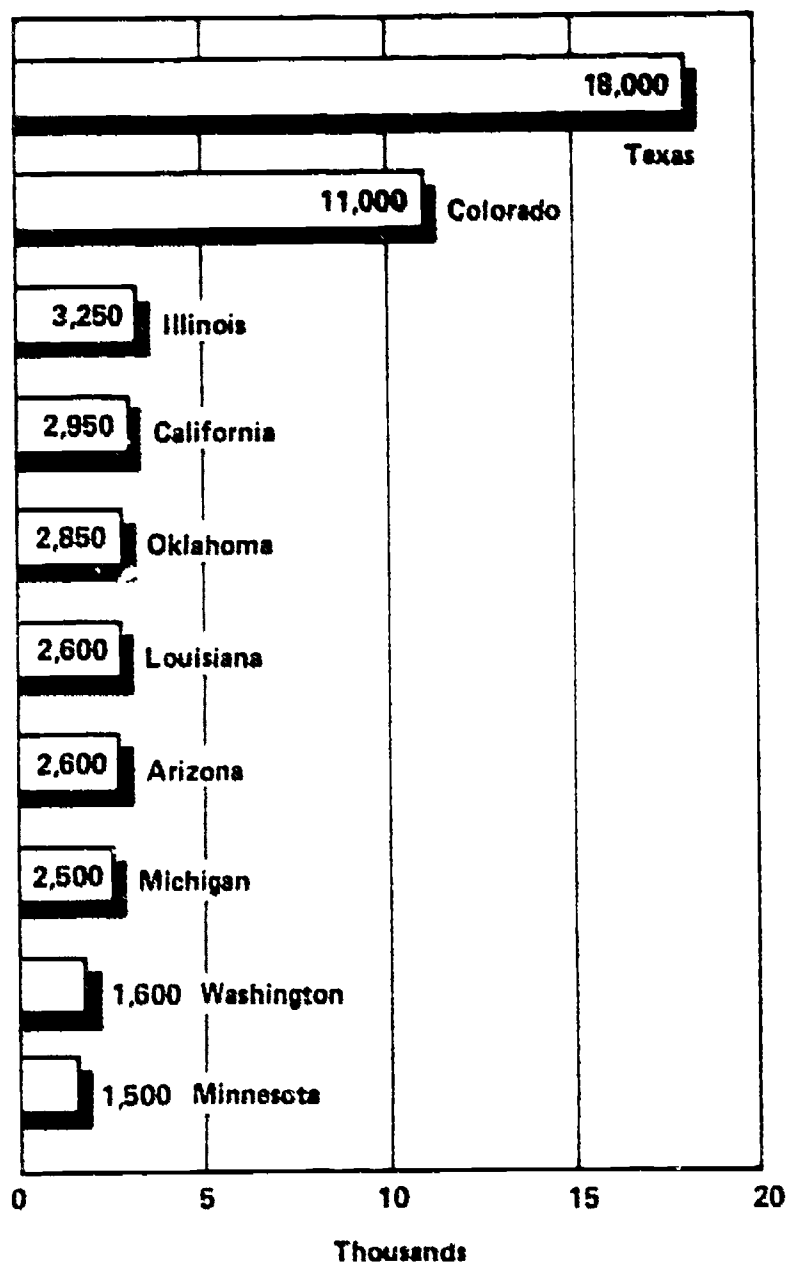
**Cities With Best Air Quality, 1988**

	Number of Violation Days
1. Cleveland	0
2. Boston	0
3. San Jose	0
4. Detroit	1
5. Pittsburgh	3

Source: Environmental Protection Agency, 1988.



**Figure 3**  
**Housing Foreclosures\* in Troubled States,**  
**As of August 31, 1988**



\*Numbers are estimates.

Source: *The Washington Post*, using data from the Farmers Home Administration, HUD and the Veterans Administration.

economic resources that are recession resistant, while the "Sun Belt," extolled by every futurist from John Naisbett to Marvin Cetron as the place to seek fame and fortune, is now in deep ecological and economic trouble. The Rocky Mountain states are pushing hard for "high tech" as a major source of stability for their economies, and it may be that there will not be enough high tech to go around. Certainly tourism, mineral extraction and energy are unlikely to settle down. In addition, the major jobs in tourism—maids, waiters and waitresses, janitors, night watchmen, clerks and cashiers—do not pay very well at all.

Yet, Colorado's past has been largely boom and bust, and the U.S. Census Bureau projects that Colorado's

population will continue to grow, from 3.4 million in 1990 to 3.8 million in 2000 and to 4 million by 2010, a growth rate (11 percent for the 1990-2000 period and 7.5 percent for 2000-2010) a little above the national average. This growth rate hides the fact that 13,000 people leave each year. In many western states, when times get bad, people "hunker down" rather than leaving for a place where things look better. It may be the only way to survive a boom and bust economy if you like the scenery.

On the other hand, it may not be possible to SEE the scenery in 2010 in parts of Colorado. It seems hard for Colorado to mount a serious attack on very pressing problems—the Front Range continues to sprawl out across a huge megalopolis (see the cover of this publication) in a very uncoordinated fashion, the altitude makes cars run in a very inefficient and highly polluting way which, in addition to the "bowl" of air inversion which makes the threat of future pollution even more vital, the fragility of the water delivery system in Colorado is more obvious every day, the severance tax issues grow more complex, yet Colorado has little ability to develop a PLAN for attacking these problems. Even the election of Governor Lamm (and his re-election) did not result in the legislature's passage of legislation which could protect the state from its own development, even in a western, "everyman for himself" state. Future growth is usually seen as part of the solution rather than as part of the problem. Continued growth will require even more water, and some of the proposals for expanding the water supply, based on water located 600-1,000 miles away, make Rube Goldberg look like a careful planner. And that's water for new homes, agricultural irrigation and energy development. Even though the scenery is still beautiful, there are times for action. As *The National Journal* author, Neal Peirce puts it:

A once-in-a-generation opportunity to build a resilient, conserving society in one of the most exquisite places on earth will have been forsaken.

Let's now have a look at how this very special state looks in comparison with the rest. (See Colorado Profile next page.)

**W**eaving a pattern from these numbers, Colorado emerges as an exceptionally beautiful yet vulnerable state, both ecologically and economically. The environmental vulnerability comes from the highly compressed, dense human population of the Front Range and the sparse natural resources per acre, including water and air (very low density at altitude) plus the famous "bowl effect" that holds pollutants over Denver. There are no buffers between contamination and the environment, and it is very hard to throw or flush ANYTHING "away." The economic vulnerability comes from a non-diverse economy built on agriculture, minerals and energy extraction, all three are bound to go up and down very often and with wide swings.

The state's population is about average in size, but it is very concentrated and not distributed evenly. Although

# **COLORADO PROFILE AND STATE RANK**

	Colorado	Rank	United States
<b>Population, 1988</b>	3,290,000	26th	245,807,000
<b>Population Change, 1980-88</b>	+ 13.8%	11th	+ 8.5%
<b>Population Projection, 2000</b>	3,813,000	25th	267,747,000
<b>Percent of Population:</b>			
<b>Over Age 65</b>	9.2%	47th	12.3%
<b>Living In Metro Areas</b>	81.7%	12th	76.9%
<b>Black Adult Population, 1988</b>	90,000	28th	20,441,000
<b>Hispanic Adult Population, 1988</b>	264,000	9th	18,000,000
<b>Births (per 1,000 population), 1986</b>	16.9	10th	15.6
<b>Percent to Teenage Mothers</b>	10.2%	34th	12.6%
<b>Percent to Unmarried Women</b>	18.0%	36th	23.4%
<b>Infant Deaths (per 1,000 live births)</b>	8.6	46th	10.4
<b>Doctors (per 100,000 population), 1986</b>	199	15th	205
<b>Hospital Beds (per 100,000 population), 1986</b>	441	41st	532
<b>Average Hospital Daily Room Charges, 1988</b>	\$260	15th	\$253
<b>Murders (per 100,000 population), 1987</b>	7.3	23rd	9.0
<b>Crimes (per 100,000 population), 1987</b>	7,032	5th	5,480
<b>Crime Rate Change, 1985-87</b>	- 6.8%	49th	+ 6.5%
<b>Violent Crimes (per 100,000 population), 1987</b>	468	21st	609
<b>Prisoners (per 100,000 population), 1986</b>	112.4		
<b>Percent of Population Who Voted In 1988</b>	55.1%	16th	50.2%
<b>Presidential Election</b>			
<b>State/Local Government General Expenditures (per capita), 1986</b>	\$2,568	21st	\$2,504
<b>Income Tax as Percent of State Revenue</b>	40.4%	9th	30.8%
<b>Federal Grants to State and Local Governments (per capita), 1987</b>	\$349	45th	\$427
<b>Federal Defense Funds, 1987</b>	\$ 4.4 Billion	16th	\$215 Billion
<b>Social Security Recipients, 1987</b>	11.7%	47th	15.3%
<b>Food Stamp Recipients, 1987</b>	5.8%	32nd	7.5%
<b>Average Annual Pay, 1987</b>	\$20,736	11th	\$21,855
<b>Bank Deposits (per capita), 1987</b>	\$ 6,137	40th	8,134
<b>Employment Population Ratio</b>	69.2%	2nd	61.5%
<b>Female Labor Force Participation Rate, 1988</b>	61.6%	10th	56.6%
<b>Gross State Product, 1986</b>	\$59.2 Billion	23rd	\$4,191 Billion
<b>Manufacturing (as a Percent of Gross State Product), 1986</b>	12.9%	40th	19.7%
<b>Change In Housing Starts, 1985-87</b>	- 38.7%	48th	- 10.2%
<b>Retail Sales Per Capita, 1987</b>	\$6,681	18th	\$6,348

Source: U.S. Bureau of the Census, *Statistical Abstract of the United States*, 1989.



the growth rate has been greater than the nation, it is not as great as Florida, Texas, etc. By the year 2000 Colorado will have 3.8 million people and will move from a rank of 26th to 25th. The elderly population is a small fraction of the state total, although it will increase in the decade to come. The Hispanic population is much larger than the black population, and has been in Colorado for a long time indeed. (Hispanics got in on the ground floor in terms of mining and farming, and generally do better than Hispanics in most other states in terms of income.)

Fertility rates are high, given the large number of young adults in the population. In addition, "at risk" babies born to teenage or unmarried mothers are a surprisingly small percentage of total births in the state, and Colorado has a very low level of infant deaths in the first year of life. There are fewer doctors and hospital beds per 100,000 people in Colorado than the nation as a whole, and the cost of a hospital room is greater than average. In addition, health care outside the Front Range may be very difficult to find.

The state's violent crime rate is about at the national average, but nonviolent crime is very high (personal, household or car theft, burglary, drug usage). Thus the criminals that get the longest jail sentences are comparatively rare in Colorado, meaning a rather small number of prisoners per 100,000 citizens. Again, a highly educated population will tend to have a lower number of prisoners, because education leads to economic self-sufficiency while over 80 percent of the prisoners in our jails are high school dropouts, and each one costs the taxpayer around \$20,000 a year just for maintenance. A high school dropout will get, at best, a minimum wage job with not enough pay to allow for the basics of owning or renting a home, getting married, starting a family or even owning a car.

Given the very high educational level among the adults of Colorado, the percentage of people who voted in the 1988 Presidential election is somewhat lower than expectations. State and local government funding is about at the national level per person, although income taxes are a very high percentage of the total, and severance taxes are very high in most energy extraction businesses. In typically western fashion, reliance on federal formula grants is very low, even though the federal government is welcomed in terms of defense dollars coming to Colorado (some \$4.4 billion).

A young population has a low level of social security recipients, and the low level of food stamps may or may not show a low level of poverty—it may be that the state doesn't like food stamp programs as sapping independence, energy, etc. It IS clear that Coloradans earn a lot of pay, and that they save a very small fraction of it. (The "now ethic" seems alive and well in the state.) Most people who are capable of working are in the work force, especially women. But most people who are capable of saving are not in the "savings force," perhaps because younger citizens don't have the desire to save, that happens usually in the middle years.

While the Gross State Product was reasonable in 1986, the precipitous drop in housing starts from 1985-87, plus the mortgage foreclosure and business failure data men-

tioned earlier show that as of 1989, Colorado had not yet climbed out of the economic hole it was in previously. But Coloradans seem a lot like Texans in this respect—when times are bad, most do not move away, they "hunker down." Because the major problems in the Colorado economy do not seem to be overly concerned with the production of jobs but rather with the economic "pipeline" that is necessary for jobs to function, it may be that the state can rebound quite quickly when the economic pipeline that fuels jobs gets unclogged. The limited amount of outmigration from the Denver area was scheduled to end by the end of 1989 as employment levels began to rebound. But because of the overbuilding in the eighties (both office and residential) it seems unlikely that Denver will lead Colorado to good times. Granted, business services are up, and the activity surrounding the new airport and the Denver convention center will pump new dollars into the Denver economy, but they represent cost centers as well as profit centers. Although the Denver metropolitan area is about half of the state's population, it is likely that the entire Front Range will have to show economic growth, and not just Denver. Certainly the decline in construction and related fields should bottom out during 1990, and Denver business services should show some modest gains.

However, the long-term problem for Colorado comes from the lack of diversity in the economy, and the dependency, even now, on highly fluctuational areas. There is an increase in business services, software, etc., but if one looks for the major markets within 200 miles of Denver, they are very hard to find. In addition, the state has shown a prolonged unwillingness to deal with the truly urgent problems of the rapid decline in one of the most beautiful and vulnerable environments to be found, even on social issues. Because poverty is not highly visible in Colorado, it is easy to ignore.

Before proceeding to the discussion of educational issues, it is worth a moment to consider the very special Hispanic population of Colorado. Although over 60 percent of Colorado Hispanics are of Mexican ancestry, they have been in Colorado for a long time, and have been involved in mining and timber from the beginning. As a result, they are comparatively well-organized politically, with strong organizations in the areas of business, church and political action. Over half of the state's Hispanics live in the Denver metro area, mostly in Adams and Denver counties, not in Arapahoe, Boulder, Gilpin, Jefferson and Douglas. The original Denver barrio area was north of today's "downtown," which has, via roads and business expansion, split the original Hispanic community into several fragments.

Whites, blacks and Hispanics in the Denver metro area all earn more than their counterparts in other places, but white household income is still far higher than that for blacks or Hispanics. But the potential for advancement makes Colorado an attractive place for Hispanics in California, the Midwest and Southwest. Because of the length of time in the area, a small percent of Hispanics speak Spanish at home. The *Hispanic Almanac* suggests that 90 percent of Hispanics speak only English at home. (The

# COLORADO'S EDUCATIONAL SYSTEM

	1983-84	1988-89
<b>School Enrollment:</b>		
Elementary	319,064	319,216
Secondary	223,111	240,865
Total	542,175	560,081
<b>Per Pupil Expenditure (CO)</b>	\$3,261	\$4,633 Rank-18th
<b>Per Pupil Expenditure (U.S.)</b>	\$3,173	\$4,509
<b>Average Teacher Salary (CO)</b>	\$22,895	\$29,558
<b>Average Teacher Salary (U.S.)</b>	\$22,019	\$29,567
	<b>Colorado</b>	<b>U.S. 1988-89</b>
<b>Funding Sources:</b>		
Federal	4.7%	4.8%
State	42.0%	38.5%
Local	53.3%	56.7%
<b>Graduation Rate</b>	70.9%	73.7%
<b>Pupil/Teacher Ratio</b>	18.7 to 1	18.0 to 1
		71.1%
		17.6 to 1
<b>Per Capita Income, 1987</b>	\$15,584	Rank 15th
<b>Adults with College Degree, 1988</b>	23%	1st
<b>1988 ACT Scores</b>	19.7	7th (of 28 states using ACT)
<b>Percent of ACT Scores over 26</b>	17.1%	4th (of 28 states using ACT)
<b>Percent of Population Age 5-17 Years in Poverty</b>	10.8%	39th
<b>Handicapped Students (as a percent of student enrollment)</b>	9.3%	44th
<b>Minority Students as a Percent of School Enrollment, (1987):</b>		
Hispanic	14%	
Black	5%	
Asian	2%	
American Indian	1%	
Total Minority	22% (U.S. 30%)	
	<b>1990</b>	<b>2000</b>
<b>Total Population, 0-18 Years</b>	886,000	924,000
<b>Percent minority</b>	25.3%	28.4%
		<b>2010</b>
		893,000
		33.1% (U.S. 38.2%)

Source: U.S. Bureau of the Census, *Statistical Abstract of the U.S.*; 1989. Institute for Educational Leadership, Center for Demographic Policy, *State of the States, 1989*; *American Demographics*, May 1989; and U.S. Department of Education, Secretary's Office, *State Educational Performance Chart, 1989*.

language shift literature supports the idea that bilingual problems disappear with time). In addition, Hispanic educational levels are quite high in Colorado—about one in four has had some college, which is higher than other states and metro areas like Chicago, New York and Los Angeles.

The frustration is that while Hispanics do well in Colorado, so do whites, leaving the margin between them very high. In addition, in times of economic downturn, the better educated white population is much less vulnerable than the Hispanic population. In this environment, tensions and conflicts can be very difficult for Hispanic children, particularly in school settings: *You are supposed to do better than your parents, you are supposed to compete with your fellow students for grades but cooperate with them in other ways, you are supposed to look teachers straight in the eye and speak immediately when asked, even though many Hispanics consider downcast eyes and silence to be a mark of respect, etc.* Increasing numbers of Asian children in Colorado wrestle with the same cultural conflicts.

Now we can take a look at the numbers for the Colorado educational system, having established something of the context in which the educational system must operate.

**W**e have now learned one of the reasons Colorado bounces back from serious recessions—the remarkably well-educated young work force. However, even though Colorado leads the nation in the percentage of adults with a college degree, it is clear that a large fraction of these college degree holders earned their degree in another state, whose taxpayers funded the degrees that then moved to Colorado.

Even during the economic downturn, per capita income stayed high, and in terms of level of effort, Colorado seems to be about average in support of education. (However, that support is heavily from local tax revenues, at a time when most states are moving toward greater responsibility for education. In terms of state level commitments to public schools, Colorado is far behind.) The enrollment data suggests a major problem—a decade of enrollment growth in the 1990s followed by a decade of decline to open the next Century. The decline will be heavily Anglo youth, while the percentage of minority school enrollments continues to expand after the year 2000.

Looking at "quality" measures, the state has an extraordinarily low level of high school graduation, considering that the adult population is number one in college degree holders. (People who have benefitted from high educational levels are usually supportive of education, at least for their own children.) By contrast, Minnesota has a 90 percent high school graduation rate with a smaller percent of adult college degree holders than Colorado. On the other hand, Colorado ACT scores are high, and the percentage of students scoring at the top of the test is 4th (of the 28 states using the ACT test). The state is also 9th in the nation in the percentage of students who have taken Advanced Placement courses. One way to read these data is to assume that the very well-educated take care of their

own, but that in the "every man for himself" state there is less concern for the education of other people's children.

This theory is supported by the fact that poverty, while below the national average for young people, is not unknown in Colorado, but because most people are doing all right it is relatively easy to overlook the poor. The same notion would apply to the handicapped, in that only six states have a smaller percentage of special classes for such children. Even though minority populations do reasonably well in Colorado, the gap between their income and that of Anglos is no narrower than in the nation. A clear equity agenda seems to elude Colorado, just as is the case for the urgent steps needed to maintain the environment. It is hard for Colorado to "get its act together," either for the environment or for kids. But if the environment deteriorates further, why will the PhD's in engineering, trained in Michigan and Ohio, want to move to Colorado? If all young people do not get a good education, what will happen to the high per capita income in the state?

The parts of the nation that are having a "Baby Boomlet" (90 percent of which is in the south and west) are reporting an increase in ELEMENTARY enrollments. The disconcerting thing about Colorado is the increase in secondary enrollments in 1989, with no increase in elementary populations. One interpretation is that the number of young families with children moving to Colorado will decline in the 1990s or that others have moved away. This does not bode well for the future of Colorado's work force. In addition, the state has never liked pay as you go financing, preferring to finance present projects on anticipated revenues from future taxpayers moving to the state. During the 1990s, state projects will have to be financed from current state revenues, and the educational investments will have to show the ability to finance increases in the 1990s, with some decreases in the number of students in the following decade. Yet, the percentage of minority and "special needs" students is going to increase long into the next century. Colorado's leaders will have their hands full in planning for education over the next twenty year period.

In order to complete our discussion, we should take a moment to look at the higher education data in Colorado. See Higher Education Profile next page.

**C**olorado has a large number of institutions of higher education for a mountain state. However, the two-year enrollment is a lower percentage than in most states. This is probably due to the large number of out of state students who come to Colorado's four-year institutions, especially the University of Colorado at Boulder. According to state authorities, 83 percent of new students in 1986 were Colorado residents. The percentage of full-time students is proportionately higher than expected, probably for the same reason.

But compared to other states, Colorado higher education seems over-governed. There are six "college systems" in Colorado, each with its own governing board. Even the School of Mines has its own governing board. The Commission on Higher Education has done some



## COLORADO'S HIGHER EDUCATION PROFILE, 1988

<b>Public Four-Year Institutions</b>	13
<b>Public Two-Year Institutions</b>	15
<b>Private Four-Year Institutions</b>	17
<b>Private Two-Year Institutions</b>	9
<b>Total Institutions</b>	54
<hr/>	
<b>Vocational Institutions</b>	134
<hr/>	
<b>Student Enrollment:</b>	
<b>Public Four-Year Institutions</b>	106,571
<b>Public Two-Year Institutions</b>	55,023
<b>Private Four-Year Institutions</b>	17,708
<b>Private Two-Year Institutions</b>	4,281
<hr/>	
<b>Women Students (as a percent of all students)</b>	52.0%
<b>Minority Students (as a percent of all students)</b>	11.9%
<b>Minority Students in Two-Year Campuses</b>	52.0%
<b>Full-Time Students</b>	59.6%
<b>Percent Change in Enrollment, 1978-88</b>	+ 19.2%
<hr/>	
<b>Average Tuition and Fees (Public Four-Year Institutions)</b>	\$1,482
<b>Average Tuition and Fees (Public Two-Year Institutions)</b>	\$ 623
<hr/>	
<b>State Funds for Higher Education Operations</b>	\$475,181,000
<b>Percent Change, 1986-88</b>	+ 12%

Source: Chronicle of Higher Education, *Almanac*, September 6, 1989

excellent studies, particularly of minority retention and academic progress. The Commission has also studied the options for the Auraria Higher Education Center in Denver, a location where many institutions, programs and students meet in confusing circumstances. But this is not a "superboard," and the state legislature continues to hold to itself the right to scrutinize higher education very carefully. This supports our general notion that it is hard for Colorado to organize itself to accomplish an agreed-upon goal.

Both of the largest universities do well in garnering research grants. In Fiscal Year 1988, the University of Colorado ranked 20th in federal research and development (R&D) funds with \$96 million, while R&D funds from all sources ranked 28th at \$128 million. Colorado State University ranked 59th in federal R&D funds at \$44.6 million, and ranked 77th in R&D funds from all sources at \$59.3 million. (Both institutions do better from the federal government than they do from private foundations.) The issue is important, given the state's desire to diversify the economy by attracting high tech businesses to Colorado. Indeed, Colorado has become so competitive in R&D that some of the giants like California are becoming

a trifle concerned, given the fact that the University of Colorado got more federal R&D money than did Cal Tech! (In Colorado, you can do research and breathe too, at least if you pick your spots carefully.)

In sum, the state has a diversified system (s) of higher education, comparatively well supported by the legislature who, nevertheless have a hard time keeping their hands off the institutions. Although comparative data are not available, it must cost a lot to govern Colorado's colleges and universities. Minorities are not overly well represented among the students, and Hispanics are disproportionately in community colleges and not at the flagships. Although data are still sketchy, it appears that few Hispanics graduate from four-year programs. (On the other hand, we are now finding out that in general, only about 15 percent of American students graduate from four-year programs in four years.) There seems to be considerable interest in Colorado in working on the problem of minority school success, kindergarten through graduate school, an important issue for the nation as well as the state. Colorado could lead on this issue, if the state decided it wanted to.

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# SUMMARY AND RECOMMENDATIONS

It is natural for most average U.S. citizens to be very concerned about Colorado's future, because a large percentage of us plan to take a vacation there at some time. Thus, Colorado's performance during the 1980s, lackluster at best, is of real concern to many. If Colorado cannot get its act together in order to save its truly gorgeous environment, then what hope is there for Ohio?

During the 1990's, things should get better, as business services and various kinds of "tech" increase in the state. But the major dependencies—on agriculture, minerals and energy extraction—remain. Even tourism, an expanding part of the Colorado economy, generates many jobs that pay minimum wage and very few jobs that pay well. Colorado has actually done better than most of the mountain states during the decade, but the tough problems remain for the "every man for himself" state. Here are some suggestions.

1. The Colorado Hispanic population is large and growing. It has been around Colorado for a long time, and successful Hispanics are making their way into government and business. Just as the Greeley "Dream Team" has taken on the task of reducing high school dropouts to a handful by 1995, so the state could decide to lead the nation in the percentage of minority students who graduate from high school, go on to college and FINISH. This would not require vast fiscal resources, but would require the coordination of human resources in a very sophisticated way.

2. Colorado adults have more college degrees per capita than any other state. Yet the state has had great difficulty in becoming the "education state" just as President Bush has had difficulty becoming the Education President, and for some of the same reasons. Because so many well-educated people have moved to Colorado after their educations were paid for by another state, Colorado has assumed an educational advantage they have not paid for—the "scenery factor." In the future, educational development should be accomplished by "pay-as-you-go" financing rather than assuming that future population growth will increase the tax base by a certain amount.

3. Population densities will increase in the Front Range, as will ethnic, cultural and linguistic diversity. Not just more Hispanics from Mexico—most of the world will be represented in Colorado's population by the year 2000. This diversity could be a source of great energy, innovation, and new businesses for Colorado, or it could be diverted to increasing the percentage of at-risk children in the state. The densities in the Front Range are great enough for a variety of new small business starts to be made successfully, especially small businesses run by the more diverse population now moving into Colorado. The state could do much to enhance the starting of small businesses.

And how do we get more black and Hispanic middle-class families to take up skiing so that they will come to Colorado and buy things being sold by the minority small businesses in Colorado? (American Hispanics buy about \$140 billion of goods and services each year, and blacks buy about \$250 billion.)

4. Because populations are so concentrated in the Front Range, it is easy to overlook rural poverty in Colorado. In some areas, essential services are very costly (a "Meals on Wheels" program that has to go 20 miles between stops will be much more costly than the same delivery schedule in a high density suburb where a driver can make 10 deliveries in the same apartment building). Some of these areas have a number of American Indians, a group particularly poorly served in the past. The same argument could be made for handicapped populations in Colorado, not well served at present. Although rugged individualism is a splendid thing, it can be tempered with compassion with little harm done. Just as the state needs to get together on a broad brush environmental strategy, it could also get together on a general strategy to increase equity, which might also increase economic opportunity and provide some jobs in the sparsely settled regions. The excellence of much of the Colorado higher education system is not yet available to all.

5. It may be that in the years to come, more initiatives for improving education will come from the local level in Colorado. At the moment there seem to be many promising examples in the state—Denver's coalition—building activity, the Greeley "Dream Team" and the achievements of the Academy School District are three among many. While these developments are commendable, there is a need for a sense of urgency for improved education across the state. The Governor and legislature must share this burden—Colorado must stop relying on the in-migration of well-educated people from other states. Colorado must grow its own.